

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

### **Listing of Claims:**

1. **(Currently Amended)** A method to detect and/or to avoid the modification of software embedded in a programmable memory within a system comprising a hard kernel containing hardware security functions suitable for verifying the integrity of a soft kernel comprising a programmable memory, the system comprising a local data interface, comprising the following steps:

placing the system in a disabled state if ~~[[the]]~~ a signal received on the local data interface is ~~not valid~~ invalid;

instigating a secure startup procedure, with execution of the control functions if the signal received on the local data interface is a disconnection signal, or there is no signal;

auto testing of the hard kernel wherein:

if the auto test is OK, then test the integrity of the reprogrammable memory;

if this integrity is OK, then activate the system for normal operation;

if this integrity is ~~[[KO]]~~ OK, then place the system in a disabled state;

if the auto test is ~~[[KO]]~~ OK, then place the system in a disabled state;

wherein if the received signal is a valid startup signal;

if the system is in a development mode, render it enabled;

if the system is in an enabled utilization mode and if the signal is a test signal, then deactivate at least one of the essential functions of enabled operation.

2. **(Currently Amended)** A method to detect and/or to avoid illicit modifications of manufacturer software within a GSM-type system, comprising a hard kernel and a soft kernel, a local data interface, comprising at least the following steps:

placing the GSM terminal in a disabled state, if ~~[[the]]~~ a signal received on the local data interface of the terminal is ~~not valid~~ invalid;

instigating a secure startup procedure, with execution of the control functions if the signal received on the local data interface is a disconnection signal, or there is no signal:

auto testing of the hard kernel wherein:

if the auto test is OK, then test the integrity of the soft kernel;

if this integrity is OK, then activate the terminal for normal operation;

if the integrity is ~~[[KO]]~~ OK, then place the terminal in a disabled state;

if the auto test is ~~[[KO]]~~ OK, then place the GSM terminal in a disabled state;

wherein if the received signal is a valid startup signal;

if ~~[[the]]~~ a fuse is not blown, render the GSM terminal enabled;

if the fuse is blown, render the terminal not totally enabled, by deactivating at least one of the enabled functions of the terminal;

if the signal is a signal of JTAG test type, continue the test procedure,

if the signal is a test signal, start up in nonsecure mode and continue the test procedure.

3. (Previously Presented) The method according to claim 1, wherein the exchange of the data between the hard kernel and the soft kernel is performed by using an algorithm based on the principle of non-replay and of nonpredictability of the transmitted data.

4. (**Currently Amended**) The system making it possible to detect and/or to avoid the modification of software embedded in a programmable memory comprising a hard kernel containing hardware security functions and a soft kernel comprising a programmable memory, a local data interface able to receive signals, ~~characterized in that it comprises~~ comprising means suitable to:

placing the system in a disabled state when ~~[[the]]~~ a signal received on the local data interface is ~~not valid~~ invalid;

for a disconnection signal received or an absence of signal on the local data interface, instigating a secure startup procedure, with execution of control functions:

auto testing of the hard kernel wherein:

if the auto test is OK, then test the integrity of the programmable memory;

if this integrity is OK, then activate the system for normal operation;

if this integrity is ~~[[KO]]~~ OK, then place the system in a disabled state;

if the auto test is ~~[[KO]]~~ OK, then place the system in a disabled state;  
for a received signal is a valid startup signal;  
if the system is in a development mode, render it enabled;  
if the system is in an enabled utilization mode, and if the signal is a test signal then deactivate at least one of the essential functions of enabled operation on startup.

5. **(Currently Amended)** The system according to ~~[[C]]~~claim 4, ~~characterized in that it comprises~~ comprising means of securing the data exchanges between the hard kernel and the soft kernel.

6. **(Currently Amended)** The system according to ~~[[C]]~~claim 4, ~~characterized in that~~ wherein the system is a GSM terminal.

7. **(Currently Amended)** The system according to ~~[[C]]~~claim 4, ~~characterized in that~~ wherein the system is a micro-computer.

8. **(Currently Amended)** The system according to ~~[[C]]~~claim 4, ~~characterized in that~~ wherein the system is an MP3-type reader containing a reprogrammable memory.

9. (Previously Presented) The method according to claim 2, wherein the exchange of the data between the hard kernel and the soft kernel is performed by using an algorithm based on the principle of non-replay and of nonpredictability of the transmitted data.